

REMARKS

SECTION 102 AND 103 REJECTIONS

The Examiner has rejected claims 1 and 2 under 35 U.S.C. Section 102 as anticipated by Cowieson and by Waller '295.

The Examiner has rejected claims 3-5, 7, 8, 10, 11, 13, 14 and 19-21 under 35 U.S.C. Section 103 as unpatentable over Waller '295 in view of one or more of Aylward, Cowieson, Kwang and Klayman.

The Examiner relies on Cowieson and Waller '295 for among other teachings, "a process for dynamically decoding two channel stereo into multi-channel sound" which includes the step of "feeding left and right input signals (see Fig. 1, L, R) to left and right front and surround channel outputs (L_O , R_O , C_O , LR_O , R_{RO}), respectively."

This argument is asserted as to the Section 102 and Section 103 rejections. It is not correct. In the present application, all of the claims (some as originally written and some as amended) require a dynamic varying of amplitude or frequency (e.g. applicant's Figures 6 and 7) not taught by Cowieson or Waller '295.

COWIESON

The Cowieson patent discloses a Q filter that is not dynamically controlled. The 6,198,826 patent references patents 5,440,638, 5,105,462 and 5,208,860 disclosing the operation of the Q filters of the '826 patent. In all of these referenced patents, the disclosure for the Q filters shows a fixed filter with fixed transfer function including signal inversion, frequency amplitude modification and frequency dependent delay. The '638 patent states that the filters perform amplitude and phase alterations on a predetermined frequency dependent basis. This is different from the present application where either the amplitude or frequency of the right and left input is dynamically varied and the dynamically varied signals are subtracted from the right

and left surround channel outputs, respectively, when the sum of the left and right input signals is dominant. The present system is controlled by generating DC steering control signals based on the amplitude and frequency of the input signals. The '826 patent does not disclose any method of dynamically subtracting the right and left input signals from the left and right surround channels dynamically based on generating DC steering control signals and varying the gain or amplitude of the signal.

WALLER '295

In Figure 1 of Waller '295, the left and right input signals are applied to difference amplifier 30 producing an L-R mono audio output signal. This L-R mono signal is then applied to surround steering circuit 130 where the mono signal is steered to the left surround or right surround outputs L_{RO} or R_{RO} . Waller '295 does not teach or even consider feeding the original Left input signal and Right input signal to the Left Surround and Right Surround output and dynamically subtracting the Right input signal from the Left Surround output and dynamically subtracting the Left input signal from the Right Surround output.

For this reason, applicant believes all of the claims as amended are patentable over the cited references. Applicant has not addressed the other references cited and arguments raised by the Examiner because they are all dependent on the underlying premise that Cowieson and Waller '295 teach this dynamic variation. The premise is incorrect.

SECTION 112 REJECTIONS

The Examiner has rejected claim 10 under 35 U.S.C. Section 112 because the specification does not enable one skilled in the art to perform the step of "subtracting the right and left high frequency band signals from the left and right surround channel outputs when the summed high frequency band signal is dominant." Applicant refers the Examiner to Figures 3, 4, 6, 7, 9 and 10 and accompanying description at pages 15-18 and 24-25 enabling the claimed step.

DRAWINGS

The Examiner has objected to the drawings because, in Figure 1, reference characters 9L and 9R are missing. Figure 1 has been amended accordingly. See revision in red on attached drawing sheet which will be formally corrected and submitted after Notice of Allowance.

CONCLUSION

It is believed that all of the claims pending in this application are in condition for allowance and allowance of all claims is respectfully requested.

Enclosed please find a Petition for Extension of Time for one month. The Director is authorized to charge this fee and any fee deficiency to Deposit Account No. 50-1971 per 37 C.F.R. § 1.25.

Respectfully submitted,



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Date

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AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig.1. This sheet, which includes Fig. 1, replaces the original sheet including Fig.1. In Figure 1, previously omitted elements 9L and 9R have been added.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

FIGURE 1

